

REMARKS

In the Office Action dated October 21, 2003, claims 1-9, and 17-43 were rejected under 35 U.S.C. § 103 over U.S. Patent No. 5,544,359 (Tada) in view of U.S. Patent No. 5,956,704 (Gautam); and claims 10-16 were rejected under § over Tada alone.

The Examiner correctly notes that flushing a transaction log, as recited in claim 1, involves transferring the transaction log from volatile storage to non-volatile storage. To make this explicitly clear, the language has been added to claim 1. However, it is noted that the added words to claim 1 make explicit what is already implicitly in claim 1 from the term "flush of a transaction log." Therefore, the scope of claim 1 has *not* been narrowed by this amendment.

The Office Action asserted that Tada discloses performing a transaction log flush as recited in claim 1. It is respectfully noted that Tada does not disclose the flushing of a transaction log from a volatile storage to non-volatile storage. The Office Action cited to Figure 5 and the passage at column 10, lines 33-34, of Tada as disclosing the performing of a flush of a transaction log. The cited passage refers to the transfer of log data to a log data buffer 132 on a main storage unit 101. Tada, 10:33-34. The main storage unit "is formed of a *volatile* random-access memory (RAM)." Tada, 8:13-14 (emphasis added). The log data buffer 132 (in addition to volatile HLF buffers 114), are part of the volatile main storage unit 101. Tada, 8:5-9. Thus, the transfer of the log data to log data buffer 132 is a transfer of data to *volatile* storage. Therefore, the cited passage in column 10 does not disclose the performance of flushing of a transaction log from volatile storage to non-volatile storage.

Applicant notes that Tada does disclose the transfer of log data to HLF buffer 112 in non-volatile memory 103. Tada, 11:30-33. However, note that this transfer of log data to non-volatile memory is performed *after* the issuance of a transaction-end instruction. Tada, 10:43-44. Therefore, the transfer of log data from volatile storage to non-volatile storage as performed in Tada is after a transaction-end instruction has occurred--in other words, the transfer of log data from volatile storage to non-volatile storage is *part* of an end transaction procedure, not *before* an end transaction procedure, as recited in claim 1.

Because the § 103 rejection is based on the incorrect assertion that Tada discloses a flush of transaction log before an end transaction procedure, the § 103 rejection is defective on this ground. A *prima facie* case of obviousness has not been established for at least this reason.

Gautam was cited by the Office Action as teaching performing transactions by a plurality of access modules. Applicant notes that Gautam also does not disclose performing a flush of a transaction log from volatile storage to non-volatile storage before an end transaction procedure. Therefore, the hypothetical combination of Tada and Gautam does not teach or suggest each and every element of claim 1. The obviousness rejection is defective on this further basis.

Moreover, another requirement of a *prima facie* case of obviousness has not been established by the Office Action, since there is no motivation or suggestion to combine the teachings of Tada and Gautam in the manner proposed by the Office Action. One of the goals of the parallel processing system of Gautam is *not* to generate an undo log record. Gautam, 2:54-58. Criticizing prior database systems that generate undo log records during transactions, Gautam proposes that its purported invention can perform a parallel insert operation that "avoids the overhead inherent in log generation by causing changes to the table to be written without generating and storing conventional undo and/or redo log records." Gautam, 7:7-11. Therefore, "the database will be in a transaction consistent state, so the generation of conventional undo and redo log records is not necessary for recovery." Gautam, 7:15-18.

In rejecting a claim over a combination of references, the context of each of the references must be reviewed to determine what the references would fairly suggest to a person of ordinary skill in the art. In this case, the teaching in Gautam of not generating undo log records would teach away from the solution proposed by Tada, which requires the generation of log data for performing undo operations. Because Gautam teaches away from the combination proposed by the Office Action, there can be no motivation or suggestion to combine Tada and Gautam. Therefore, the *prima facie* case of obviousness fails in this further regard.

Independent claims 17, 21, 24, and 28 are similarly allowable over the asserted combination of Tada and Gautam. Withdrawal of the § 103 rejections of claims 1, 17, 21, 24, and 28 (and respective dependent claims) is respectfully requested.

Independent claim 10 was rejected as being obvious over Tada alone. The Office Action conceded that Tada does not disclose a fallback module. However, without citing to any actual reference that would suggest a modification of Tada to achieve the subject matter of claim 10, the Office Action stated that the invention of claim 10 would be obvious over Tada.

Applicant respectfully submits that the subject of claim 10 is not obvious over Tada. Claim 10 recites a method that includes a first access module writing an end transaction indication to a first transaction log portion, where the first access module is part of a cluster of access modules, and also that the first access module sends an end transaction directive to a fallback module associated with the first access module, where the fallback module is also part of the cluster. This combination of elements is clearly not suggested by anything in Tada. Except for a conclusory statement based on the Examiner's opinion that the subject would be obvious, there is no reference to support the assertion that claim 10 is obvious over Tada alone.

If a prior art reference teaching such modification of Tada actually exists, Applicant respectfully requests the production of such a reference. Absent the production of the requisite reference, withdrawal of the § 103 rejection of claim 10 (and its dependent claims) is respectfully requested.

Because the obvious rejections of each of the independent claims are so clearly defective, the dependent claims are allowable for at least the same reasons as the independent claims.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 50-1673 (9417).

Appl. No. 09/784,392
Amdt. dated January 20, 2004
Reply to Office of October 21, 2003

Respectfully submitted,



January 20, 2004
Date

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